SESSION XXII
COMPLIANCE THROUGH P^2 INITIATIVES

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INTRODUCTION

The advent of pollution prevention (P2) as an environmental initiative has greatly expanded the options available to environmental managers in addressing environmental compliance issues. In the past, base-level P2 activities were focused on supporting Air Force goals and metrics. Unfortunately, that approach has not always addressed the needs of the installation to minimize regulatory and budget concerns, such as pollution control requirements and inspection deficiencies.

To address local regulatory issues, pollution prevention has now been added to the environmental manager's toolbox as a means of addressing these issues in a more aggressive and proactive manner. By using such P2 methods as source reduction and process modification, environmental managers now have the capacity to reduce regulatory burdens in many different areas (e.g., drinking and waste waters, spill response requirements). In the Air Force, this new approach is the subject of the August 1997 HQ USAF/ILEV policy letter, Pollution Prevention to Achieve Compliance.

The HQ USAF/ILEV policy letter directed that the P2 hierarchy is now to be used in achieving and maintaining environmental compliance. The Air Force P2 hierarchy is as follows:

- Reduce/eliminate dependence on hazardous materials and reduce waste streams (source reduction)
- Reuse generated waste and recycle waste that is not reusable (recycling)
- Employ treatment
- Dispose of waste only as a last resort (end-of-pipe treatment).

Historically, this hierarchy has been used only for ranking potential P2 projects to determine order of implementation. Now this P2 hierarchy can be used as a method for ensuring compliance, rather than driving a separate goal-driven program. Following the established hierarchy will allow the Air Force to take a proactive leadership role in reducing regulatory requirements by reducing the use of hazardous materials and the release of pollutants into the environment to as near zero as feasible. Air Force Instruction (AFI) 32-7080, Pollution Prevention Program, is currently undergoing revisions to reflect the new Air Force focus on "compliance through pollution prevention." The updated AFI 32-7080 should be final in late 1998.

INCORPORATING COMPLIANCE INTO P2 MANAGEMENT TOOLS

The compliance through P2 concept is designed to eliminate or reduce strenuous environmental compliance requirements by preventing or reducing regulated and harmful discharges into the air, land, and water at the source rather than through treatment. Reducing pollutants in the Air Force mission is the driver behind producing P2 Opportunity Assessments (OA) and Management Action Plans (MAP), the two

key requirements for a successful P2 program. The P2 OA is a systematic procedure designed to identify methods of reducing or eliminating waste or adverse environmental impacts associated with a specified process. The P2 MAP is a reference tool used to manage the actions needed to develop and execute an installation's P2 Program. The MAP incorporates opportunities identified in the OA and presents management strategies for implementation.

Historically, opportunities identified and presented in the P2 OAs and P2 MAPs addressed projects that reduced pollution and exemplified the Air Force's desire to take the lead in becoming good stewards of the environment. In previous years, the OA investigating teams would have only examined current shop processes and previous pollution program plans to identify areas where new P2 projects could be applied. Incorporating compliance into the P2 program means using compliance tools as well as typical P2 tools to identify projects not only to reduce wastes/discharges but to achieve regulatory compliance.

Earth Tech, Inc. (Earth Tech), recently completed five P2 MAPs with limited OAs and two complete OAs for various Pacific Air Forces (PACAF) installations. When performing the first step of the OA process, data collection, not only did the team assess the installations' existing P2 Plan, P2 OAs, and P2 MAP, the following compliance data was requested:

- Most recent ECAMP audit reports
- US TEAM Guide State Supplements
- Federal, State, or local Notices of Violation
- A-106 printouts for both the Compliance and P2 Programs
- Permit parameters (NPDES, Title V, Solid Waste, etc)
- Air Force and Department of Defense Instructions
- Installation-Specific Instructions

The first step in using P2 to address regulatory deficiencies is to identify those that are susceptible to P2 solutions. Not all compliance problems will have a P2 solution, and the assessment team must be able to differentiate between those not applicable and those that require "thinking outside the box" for a P2 solution.

COMPLIANCE THROUGH P2 EXAMPLES

One installation had an Environmental Compliance Assessment and Management Program (ECAMP) finding citing mismanagement of 55-gallon drums of used petroleum, oil and lubricants (POL) product. The base had a recurring problem of storage space for large volumes of used oil. The solution cited in the ECAMP document was to construct a new storage unit for the 55-gallon drums of used oil. A P2 solution would be to determine methods for reducing the quantity of oil so that extra storage would not be required. In this particular case, an oil analysis program was recommended to reduce the amount of used oil generated on the installation. The P2 solution of source reduction (reducing the amount of used oil produced) will be far more cost effective than the typical end-of-pipe solution by reducing handling and storage requirements of the used oil. Additional benefits of this solution include cost savings on virgin product, reduction in hazardous material storage regulatory requirements, and less handling of a hazardous substance, which results in less spillage and clean-up.

Another compliance finding dealt with the storage of lead-acid batteries. The concern was based on the possibility of the sulfuric acid or lead leachate contaminating a nearby drainage area. The management solution at the time of the site visit had been to construct better berms for the containment area. The recommended P2 initiative identified as a more effective solution in the P2 MAP was to replace the use of lead-acid batteries with sealed gel-celled batteries, which do not pose the environmental threats associated with lead-acid batteries.

One installation had difficulties complying with pesticide management regulations. The facility was cited for failing to have an adequate pesticide storage facility, as well as failing to have certified applicators. At the time of the compliance inspection, the facility's Pesticide Management Plan was also outdated. Large

funding requirements would have been necessary to fix these problems with the typical solutions of constructing a storage facility, sending personnel to certification courses, and updating the Management Plan to include all pesticides used on site. However, rather than implementing the typical end-of-pipe solution, the facility reassessed the need for using pesticides on the facility. After careful consideration, all pesticide use ceased and all chemicals were sent off base. Now the only type of "pesticide" used is a standard home mousetrap.

A vehicle maintenance shop was experiencing difficulty disposing of brake shoes possibly containing asbestos. Because the shop could not determine which brake shoes contained asbestos, they all had to be drummed up and sent off base for hazardous waste disposal. The shop manager said that he was also having problems finding an agency to accept the hazardous waste. The shop ended up paying a large sum of money to dispose of the brake shoes. To alleviate these disposal and handling problems in the future, the shop entered into a contract with a local brake shoe vendor. Under the contract, non-asbestos-containing brake shoes are sold to the vehicle maintenance shop and when replaced, the old shoe is returned for a new brake shoe. This one-to-one replacement has eliminated all disposal and handling requirements of asbestos-containing material for the vehicle maintenance shop.

Another installation was utilizing a dining hall freezer unit approximately four times the size needed to support the installation's food storage requirements. The freezer used power supplied by the local community and utilized three compressors containing a Class I ozone-depleting substance (ODS). Reducing the size of the freezer would reduce the installation's energy use and refrigerant requirements needed by the installation. Although the refrigerant would eventually be changed out during the ODS phaseout, reducing the size of the freezer would reduce the amount of alternate refrigerant selected to replace the Class I ODS because the smaller freezer would only require one compressor.

Besides compliance findings cited in audit inspections, permits are an excellent source to identify P2 solutions. Check your installation's National Pollutant Discharge Elimination Systems (NPDES) parameters and determine the source of the pollutants. Can this source be eliminated or can the pollutants be reduced? Once this is done, permits should be changed to reflect this to avoid a higher discharge standard and the regulations that govern them.

Another method often overlooked is the A-106 for the compliance program. Most installations have different individuals running the compliance and P2 program. Therefore, the P2 manager does not typically view the compliance requirements identified in the A-106. By working with the compliance manager, projects that could eliminate a compliance funding requirement can be identified. As an example, had the excess storage problem of used oil mentioned above not been identified in the ECAMP document, the P2 manager still would have identified a P2 opportunity by noticing a construction requirement on the compliance A-106.

CONCLUSION

All of the compliance tools mentioned can assist the installations' P2 Manager and P2 OA teams in identifying P2 options that will most likely be validated by the Major Command (MAJCOM) due to the compliance benefits. With the advent of "compliance through P2," opportunities that once seemed too expensive or not cost effective will now appear more attractive because recaptured compliance costs can be factored into the cost analysis.

It should be noted that identifying "compliance through P2" projects are more difficult when performing an installation-wide OA or compliance assessment. In order to obtain an in-depth study of P2 solutions for a compliance problem, the installation should target one compliance issue at a time. This will ensure a usable, thorough, P2 alternative for a regulatory requirement.

Incorporating compliance into the installation P2 OA and P2 MAP creates documents that can be used by the entire environmental flight to ensure compliance **and** environmental stewardship. The P2 documents,

once viewed only as "nice to have" documents in order to achieve Air Force goals, now can truly be used as proactive "must have" drivers for the entire environmental program.